

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for associating data with product abstractions comprising the steps of:

maintaining a repository of previously-generated product abstractions;

maintaining data that identifies a plurality of pre-established product categories;

inspecting a first data set that includes data that corresponds to an offer to sell a

particular product by a particular party, wherein the first data set is not currently matched to any product abstraction and the particular product is not currently assigned to any product category;

based on the first data set, determining whether the particular product matches any of said pre-established product categories;

in response to determining that the particular product does not match any of said pre-established product categories, determining whether to create a new product category based, at least in part, on whether similar uncategorized products have been previously encountered;

responsive to determining that a new product category should be created, (a) creating the new product category, (b) storing data that indicates that said particular product belongs to said new product category, and (c) establishing the new product category as one of said pre-established product categories;

matching said first data set with a product abstraction from said repository of previously-generated product abstractions based, at least in part, on the pre-established product category to which said particular product corresponds;

wherein the product abstraction is an electronic representation of a product and wherein the method is performed by a computer programmed to be a special purpose machine pursuant to instructions from program software.

2. (Original) The method of Claim 1, wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with one or more product categories; and the method further comprises the steps of:

generating mapping information associating each product offering in said plurality of product offerings with one or more product abstractions in the plurality of product abstractions;

receiving a query; and

generating a result set for the query based on said mapping information.

3. (Previously Presented) The method of Claim 1, wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with one or more product categories; and the method further comprises the steps of:

generating mapping information associating each product offering in said

plurality of product offerings with one or more product abstractions in

the plurality of product abstractions;

receiving a query;

generating a result set for the query based on said mapping information;

charging a party associated with a particular referenced entity in the result set
based at least in part on inclusion of said particular referenced entity in
said result set; and
determining how much to charge the party based, at least in part, on a product
category associated with said referenced entity.

4. (Original) The method of Claim 2, wherein the result set is a list of one or more references.

5. (Original) The method of Claim 4, wherein each reference of the list of references corresponds to a referenced entity, and wherein each referenced entity associated with each reference in the list of references is one of a product abstraction, a merchant, a product offering or a product category.

6. (Previously Presented) The method of Claim 1, wherein the step of matching said first data set with a product abstraction further comprises the steps of:

determining that said first data set does not correspond to any product abstractions in the
repository of previously-generated product abstractions that are associated with
said corresponding product category;
generating a new product abstraction based on said first data set; and
matching said first data set with said new product abstraction.

7. (Previously Presented) The method of Claim 1, wherein the step of creating the new product category further comprises the steps of:

generating the new product category based on said first data set and said similar uncategorized products; and
associating said first data set with said new product category.

8. (Original) The method of Claim 2, wherein said result set includes a particular reference to a particular referenced entity, and wherein the method further comprises the steps of:

providing said one or more result sets to one or more users; and
monitoring the number of times that said one or more users select said particular reference associated with said particular referenced entity from said one or more result sets.

9. (Original) The method of Claim 8, further comprising the step of charging a party associated with said particular referenced entity a fee based on the number of times said one or more users select said particular reference.

10. (Original) The method of Claim 2, wherein the step of generating a result set further comprises generating a page that contains one or more sponsored references and one or more unsponsored references, wherein a sponsored reference is a first reference associated with a first referenced entity, and for which a first party associated with said first referenced entity is charged for each inclusion of said first reference in said one or more result sets, and wherein an unsponsored reference is second reference for which no party will be charged for each inclusion of said second reference in said one or more result sets.

11. (Original) The method of Claim 2, wherein the step of generating a result set further comprises generating a page that contains one or more attributes of one or more products in one or more particular product categories.

12. (Original) The method of Claim 2, wherein the step of generating a result set further comprises generating a page which contains a comparison of one or more attributes of one or more entities that are referenced in the page with one or more attributes of one or more other entities that are referenced in the page.

13. (Original) The method of Claim 8, further comprising the step of providing, to a party associated with said particular referenced entity, activity reports based on information generated during the step of monitoring the number of times said one or more users selects the reference associated with said particular referenced entity.

14. (Original) The method of Claim 2, wherein said list of references comprises a plurality of references, and wherein the method further comprises the steps of
displaying said plurality of references in a particular order within said result set,
determining said particular order based on a set of aspects of each reference in said plurality of references and a set of aspects of each referenced entity to which each reference in said plurality of references refers, wherein the aspects comprise one or more of likelihood that a reference satisfies a query, existence of sponsorship, and cost of sponsorship.

15. (Previously Presented) The method of Claim 2, wherein the step of generating a result set further comprises the steps of:

applying a similarity measure between one or more aspects of a particular reference and one or more aspects of a plurality of other references, wherein said aspects include one or more aspects of the reference and one or more aspects of the referenced entity; and
selecting which references to include in said result set based on said similarity measure.

16. (Original) The method of Claim 1, wherein the step of matching said first data set with a product abstraction comprises the step of comparing an identifier corresponding to said product abstraction to an identifier corresponding to said first data set.

17. (Original) The method of Claim 16, wherein the identifier is chosen from the group consisting of Universal Product Code, International Standard Book Number, manufacturer, manufacturer's part number, and model number.

18. (Previously Presented) The method of Claim 1, wherein the step of based on the first data set, determining whether the particular product matches any of said pre-established product categories comprises the step of comparing an identifier corresponding to one or more of said pre-established product categories to an identifier corresponding to said first data set.

19. (Original) The method of Claim 18, wherein the identifier is chosen from the group consisting of Universal Product Code, International Standard Book Number, manufacturer, manufacturer's part number, and model number.

20. (Previously Presented) The method of Claim 1, wherein each product category maps to one or more product abstractions, merchants, product offerings, and other product categories.

21. (Original) The method of Claim 1, further comprising the step of obtaining product information for said first set of data by extracting the product information from an electronic catalog.

22. (Original) The method of Claim 1, further comprising the step of obtaining product information for said first set of data by crawling web sites over the Internet.

23. (Previously Presented) The method of Claim 1,
wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with a one or more product categories; and the method further comprises the steps of:

generating mapping information associating each product offering in said plurality of product offerings with one or more product abstractions in the plurality of product abstractions; and

revising said mapping information, wherein the step of revising comprises one or more of the following steps:

changing a mapping between a data set and a product offering;

changing a mapping between a first product category and a second product category; and

changing a data set.

24-46. (Cancelled)

47. (Currently Amended) A machine-readable storage medium storing one or more sequences of instructions for assigning data to product abstractions, wherein said instructions when executed by one or more processors, cause the one or more processors to perform the steps of:

maintaining a repository of previously-generated product abstractions;

maintaining data that identifies a plurality of pre-established product categories;

inspecting a first data set that includes data that corresponds to an offer to sell a

particular product by a particular party, wherein the first data set is not currently matched to any product abstraction and the particular product is not currently assigned to any product category;

based on the first data set, determining whether the particular product matches any of said pre-established product categories;

in response to determining that the particular product does not match any of said pre-established product categories, determining whether to create a new product category based, at least in part, on whether similar uncategorized products have been previously encountered;

responsive to determining that a new product category should be created, (a) creating the new product category, (b) storing data that indicates that said particular product belongs to said new product category, and (c) establishing the new product category as one of said pre-established product categories;

matching said first data set with a product abstraction from said repository of previously-generated product abstractions based, at least in part, on the pre-established product category to which said particular product corresponds; wherein the product abstraction is an electronic representation of a product.

48. (Currently Amended) The machine-readable storage medium of Claim 47, wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with one or more product categories; and the instructions include instructions for:

generating mapping information associating each product offering in said plurality of product offerings with one or more product abstractions in the plurality of product abstractions;

receiving a query; and

generating a result set for the query based on said mapping information.

49. (Currently Amended) The machine-readable storage medium of Claim 47, wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with one or more product categories; and the instructions also include instructions for performing the steps of:

generating mapping information associating each product offering in said plurality of product offerings with one or more product abstractions in the plurality of product abstractions;
receiving a query;
generating a result set for the query based on said mapping information;
charging a party associated with a particular referenced entity in the result set based at least in part on inclusion of said particular referenced entity in said result set;
and
determining how much to charge the party based, at least in part, on a product category associated with said referenced entity.

50. (Currently Amended) The machine-readable storage medium of Claim 48, wherein the result set is a list of one or more references.

51. (Currently Amended) The machine-readable storage medium of Claim 50, wherein each reference of the list of references corresponds to a referenced entity, and wherein each referenced entity associated with each reference in the list of references is one of a product abstraction, a merchant, a product offering or a product category.

52. (Currently Amended) The machine-readable storage medium of Claim 47, wherein the step of matching said first data set with a product abstraction further comprises the steps of:

determining that said first data set does not correspond to any product abstractions in the repository of previously-generated product abstractions that are associated with said corresponding product category;

generating a new product abstraction based on said first data set; and
matching said first data set with said new product abstraction.

53. (Currently Amended) The machine-readable storage medium of Claim 47, wherein the step of creating the new product category further comprises the steps of:

generating the new product category based on said first data set and said similar
uncategorized products; and
associating said first data set with said new product category.

54. (Currently Amended) The machine-readable storage medium of Claim 48, wherein said result set includes a particular reference to a particular referenced entity, and the instructions include instructions for:

providing said one or more result sets to one or more users; and
monitoring the number of times that said one or more users select said particular
reference associated with said particular referenced entity from said one or more
result sets.

55. (Currently Amended) The machine-readable storage medium of Claim 54, wherein the instructions include instructions for charging a party associated with said particular referenced entity a fee based on the number of times said one or more users select said particular reference.

56. (Currently Amended) The machine-readable storage medium of Claim 48, wherein the step of generating a result set further comprises generating a page that contains one or more sponsored references and one or more unsponsored references, wherein a sponsored reference is

a first reference associated with a first referenced entity, and for which a first party associated with said first referenced entity is charged for each inclusion of said first reference in said one or more result sets, and wherein an unsponsored reference is second reference for which no party will be charged for each inclusion of said second reference in said one or more result sets.

57. (Currently Amended) The machine-readable storage medium of Claim 48, wherein the step of generating a result set further comprises generating a page that contains one or more attributes of one or more products in one or more particular product categories.

58. (Currently Amended) The machine-readable storage medium of Claim 48, wherein the step of generating a result set further comprises generating a page which contains a comparison of one or more attributes of one or more entities that are referenced in the page with one or more attributes of one or more other entities that are referenced in the page.

59. (Currently Amended) The machine-readable storage medium of Claim 54, wherein the instructions include instructions for providing, to a party associated with said particular referenced entity, activity reports based on information generated during the step of monitoring the number of times said one or more users selects the reference associated with said particular referenced entity.

60. (Currently Amended) The machine-readable storage medium of Claim 48, wherein said list of references comprises a plurality of references, and wherein the instructions include instructions for:

displaying said plurality of references in a particular order within said result set,

determining said particular order based on a set of aspects of each reference in said plurality of references and a set of aspects of each referenced entity to which each reference in said plurality of references refers, wherein the aspects comprise one or more of likelihood that a reference satisfies a query, existence of sponsorship, and cost of sponsorship.

61. (Currently Amended) The machine-readable storage medium of Claim 48, wherein the step of generating a result set further comprises the steps of:

applying a similarity measure between one or more aspects of a particular reference and one or more aspects of a plurality of other references, wherein said aspects include one or more aspects of the reference and one or more aspects of the referenced entity; and
selecting which references to include in said result set based on said similarity measure.

62. (Currently Amended) The machine-readable storage medium of Claim 47, wherein the step of matching said first data set with a product abstraction comprises the step of comparing an identifier corresponding to said product abstraction to an identifier corresponding to said first data set.

63. (Currently Amended) The machine-readable storage medium of Claim 62, the identifier is chosen from the group consisting of Universal Product Code, International Standard Book Number, manufacturer, manufacturer's part number, and model number.

64. (Currently Amended) The machine-readable storage medium of Claim 47, wherein the step of based on the first dataset, determining whether the particular product matches any of said pre-established product categories comprises the step of comparing an identifier corresponding to one or more said pre-established product categories to an identifier corresponding to said first data set.

65. (Currently Amended) The machine-readable storage medium of Claim 64, wherein the identifier is chosen from the group consisting of Universal Product Code, International Standard Book Number, manufacturer, manufacturer's part number, and model number.

66. (Currently Amended) The machine-readable storage medium of Claim 47, wherein each product category maps to one or more product abstractions, merchants, product offerings, and other product categories.

67. (Currently Amended) The machine-readable storage medium of Claim 47, the instructions include instructions for obtaining product information for said first set of data by extracting the product information from an electronic catalog.

68. (Currently Amended) The machine-readable storage medium of Claim 47, the instructions include instructions for obtaining product information for said first set of data by crawling web sites over the Internet.

69. (Currently Amended) The machine-readable storage medium of Claim 47,

wherein said offer to sell a particular product by a particular party is a first product offering of a plurality of product offerings; said product abstraction is one of a plurality of product abstractions and each product abstraction is associated with a one or more product categories; and the instructions include instructions for: generating mapping information associating each product offering in said plurality of product offerings with one or more product abstractions in the plurality of product abstractions; and

revising said mapping information, wherein the step of revising comprises one or more of the following steps:

- changing a mapping between a data set and a product offering;
- changing a mapping between a first product category and a second product category; and
- changing a data set.